

1                   **CROSS REFERENCE TO**

2                   **RELATED APPLICATIONS**

3                 This application is a regular application of provisional application number 60/260,373,  
4                 filed December 1, 2000, entitled Natural Motion Energy Saver, by Ionel Vinchici, and to be  
5                 incorporated herein by reference thereto.

100-112002-120000

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## **BACKGROUND OF THE INVENTION**

2    **Field of the Invention:**

3                 The present invention relates to a prime mover. More particularly, the present  
4          invention relates to a primer mover for powering an electrical generator.

5    **Description of the Prior Art:**

6                 Numerous innovations for prime movers have been provided in the prior art. Even  
7          though these innovations may be suitable for the specific individual purposes to which they  
8          address, however, they differ from the present invention as heretofore described.

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## **SUMMARY OF THE INVENTION**

2           **ACCORDINGLY, AN OBJECT** of the present invention is to provide a prime mover  
3       for powering an electrical generator that avoids the disadvantages of the prior art.

4           **ANOTHER OBJECT** of the present invention is to provide a prime mover for  
5       powering an electrical generator that is simple to use.

6           **BRIEFLY STATED, STILL ANOTHER OBJECT** of the present invention is to  
7       provide a prime mover that stores mechanical energy in case of an electrical failure. When an  
8       electrical failure occurs, the prime mover is activated either automatically by a computer with  
9       a battery back-up or manually. The prime mover oscillates back and forth in a pendulum type  
10      fashion, which in turn drives an electrical generator in order to produce electricity. The prime  
11      mover comprises a base, elements that are rotatably mounted to the base, a pick-up balance  
12      that is rotatably mounted to the base, and a drive train that operatively connects the prime  
13      mover to the electrical generator.

14          The novel features which are considered characteristic of the present invention are set  
15       forth in the appended claims. The invention itself, however, both as to its construction and its  
16       method of operation, together with additional objects and advantages thereof, will be best

- 1 understood from the following description of the specific embodiments when read and
- 2 understood in connection with the accompanying drawing.

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## **BRIEF DESCRIPTION OF THE DRAWING**

2      **FIGURE 1**    is a diagrammatic perspective view of the present invention;

3      **FIGURE 2**    is a diagrammatic side elevational view taken generally in the direction of  
4                          **ARROW 2** in **FIGURE 1**;

5      **FIGURE 3**    is a diagrammatic side front view taken generally in the direction of **ARROW**  
6                          **3** in **FIGURE 2**;

7      **FIGURE 4**    is a diagrammatic top plan view taken generally in the direction of **ARROW 4**  
8                          in **FIGURE 3**; and

9      **FIGURE 5**    is an exploded diagrammatic perspective of the present invention shown in  
10                         **FIGURES 1-4.**

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**LIST OF REFERENCE NUMERALS**

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**UTILIZED IN THE DRAWING**

- 3   **10**   prime mover of present invention for powering electrical generator **12**
- 4   **12**   electrical generator
- 5   **14**   base
- 6   **16**   elements
- 7   **18**   pick-up balance
- 8   **20**   drive train for operatively connecting prime mover **10** to electrical generator **12**
- 9   **22**   rear end support of base **14**
- 10   **24**   throughbore in rear end support **22** of base **14**
- 11   **26**   front end support of base **14**
- 12   **28**   throughbore in front end support **26** of base **14**
- 13   **30**   main axle sleeve of base **14**
- 14   **32**   main axle of base **14**
- 15   **34**   generator support of base **14** for supporting electrical generator **12**
- 16   **36**   reset motor support of base **14**
- 17   **38**   plurality of element arms of elements **16**
- 18   **40**   first ends of plurality of element arms **38** of elements **16**

- 1   **42**   second ends of plurality of element arms **38** of elements **16**
- 2   **44**   element clutch of elements **16**
- 3   **46**   element gear of elements **16**
- 4   **48**   plurality of element weights of elements **16**
- 5   **50**   primary balance of elements **16**
- 6   **52**   counter balance of elements **16**
- 7   **54**   pivot of elements **16**
- 8   **56**   pick-up balance gear of elements **16**
- 9   **58**   generator arm of drive train **20** for connecting to electrical generator **12**
- 10   **60**   generator arm axle of drive train **20**
- 11   **62**   following arm of drive train **20**
- 12   **64**   driving arm of drive train **20**
- 13   **66**   reset motor of drive train **20**
- 14   **68**   pulley system of drive train **20**
- 15   **70**   first pulley of pulley system **68** of drive train **20**
- 16   **72**   second pulley of pulley system **68** of drive train **20**
- 17   **74**   third pulley of pulley system **68** of drive train **20** for connecting to electrical generator
- 18           **12**
- 19   **76**   cable of pulley system **68** of drive train **20**

## **DETAILED DESCRIPTION OF**

## **THE PREFERRED EMBODIMENT**

3 Referring now to the drawings, and particularly to **FIGURES 1-5**, the prime mover of  
4 the present invention is shown generally at **10** for powering an electrical generator **12**.

5  
6        The prime mover **10** stores mechanical energy in case of an electrical failure. When  
7        an electrical failure occurs, the prime mover **10** is activated either automatically by a computer  
8        with a battery back-up or manually. The prime mover **10** oscillates back and forth in a  
9        pendulum type fashion, which in turn drives the electrical generator **12** in order to produce  
10      electricity.

11 The prime mover **10** comprises a base **14**, elements **16** that are rotatably mounted to  
12 the base **14**, a pick-up balance **18** that is rotatably mounted to the base **14**, and a drive train **20**  
13 for operatively connecting the prime mover **10** to the electrical generator **12**.

14 The base 14 comprises a rear end support 22 that has a throughbore 24, a front end  
15 support 26 that has a throughbore 28, a main axle sleeve 30 that extends through the  
16 throughbore 24 in the rear end support 22 and the throughbore 28 in the front end support 26,

1        a main axle **32** that extends through the main axle sleeve **30**, a generator support **34** that is  
2        spaced behind the front end support **26** and is for supporting the electrical generator **12**, and  
3        a reset motor support **36** that is spaced in front of the front end support **26**.

4              The elements **16** comprise a plurality of element arms **38** that have first ends **40** that  
5        rotatably receive the main axle sleeve **30** and second ends **42**, an element clutch **44** that  
6        operatively connects the plurality of element arms **38** to the main axle sleeve **30**, an element  
7        gear **46** that is attached to the main axle sleeve **30**, a plurality of element weights **48** that are  
8        connected to the second ends **42** of the plurality of element arms **38**, a primary balance **50**,  
9        and a counter balance **52**.

10             The amount of the electricity produced is proportional to the amount of the plurality  
11        of weights **48** used in the plurality of element arms **38** and the pick-up balance **18**. For  
12        example, a small office may require the plurality of weights **48** to be one ton each (the plurality  
13        of element arms **38** to be twelve elements) and the pick-up balance **18** to be 12 tons.

14             The pick-up balance **18** rotatably receives the main sleeve **30**, is operatively connected  
15        to the plurality of element arms **38**, via a pivot **54**, and has a pick-up balance gear **56** that is  
16        operatively connected thereto.

1       The drive train **20** comprises a generator arm **58** that is disposed in front of the front  
2       end support **26** and is for connecting to the electrical generator **12**, a generator arm axle **60** that  
3       is operatively connected to the generator arm **58**, a following arm **62** that is operatively  
4       connected to the generator arm **58** by the generator arm axle **60** so as to form a crank  
5       therewith, and a driving arm **64** that is operatively connected to the following arm **58** and  
6       receives the main axle sleeve **30**.

7       The drive train **20** further comprises a reset motor **66** that extends between the front  
8       end support **26** and the reset motor support **36**, is operatively connected to the main axle **30**,  
9       and is controlled by a computer to reset the prime mover **10** once electric power has been  
10      restored.

11       The drive train **20** further comprises a pulley system **68** that comprises a first pulley  
12      **70** that is attached to the reset motor **66**, a second pulley **72** that is attached to the main axle  
13      **30**, and a third pulley **74** that is for connecting to the electrical generator **12**, and a cable **76**  
14      that operatively connects the first pulley **70**, the second pulley **72**, and the third pulley **74**  
15      together.

16       At a stating position, the plurality of element arms **38** rotate one at a time  
17      counterclockwise until they rest on the pick-up balance **18**. Once all of the plurality of element

1       arms **38** rest on the pick-up balance **18** so as to form an entire balance (*i.e.* the plurality of  
2       element arms **38** and the pick-up balance **18**), the entire balance rotates counter clockwise and  
3       causes the cable **76** to rotate each of the plurality of element arms **38** in turn clockwise back  
4       to the starting position so as to form oscillating rotations that form a progression . The  
5       progression is repeated until the plurality of element arms **38** and the pick-up balance **18** find  
6       equilibrium due to losses. The oscillating rotations drive the crank which is operatively  
7       connected to the electrical generator **12** which produces the electricity.

8              It will be understood that each of the elements described above, or two or more  
9       together, may also find a useful application in other types of constructions differing from the  
10      types described above.

11             While the invention has been illustrated and described as embodied in a prime mover  
12       for powering an electrical generator, however, it is not limited to the details shown, since it will  
13       be understood that various omissions, modifications, substitutions and changes in the forms  
14       and details of the device illustrated and its operation can be made by those skilled in the art  
15       without departing in any way from the spirit of the present invention.

16             Without further analysis, the foregoing will so fully reveal the gist of the present  
17       invention that others can, by applying current knowledge, readily adapt it for various

- 1 applications without omitting features that, from the standpoint of prior art, fairly constitute
- 2 characteristics of the generic or specific aspects of this invention.